

## **STRAINED SEMICONDUCTOR BY FULL WAFER BONDING**

### **Abstract of the Disclosure**

One aspect of this disclosure relates to a method for forming a wafer with a  
5 strained semiconductor. In various embodiments of the method, a predetermined  
contour is formed in one of a semiconductor membrane and a substrate wafer. The  
semiconductor membrane is bonded to the substrate wafer and the predetermined  
contour is straightened to induce a predetermined strain in the semiconductor  
membrane. In various embodiments, a substrate wafer is flexed into a flexed  
10 position, a portion of the substrate wafer is bonded to a semiconductor layer when  
the substrate wafer is in the flexed position, and the substrate wafer is relaxed to  
induce a predetermined strain in the semiconductor layer. Other aspects and  
embodiments are provided herein.